

## IN THE CLAIMS

Please cancel Claims 1-16 without prejudice and without disclaimer of subject matter and add Claims 17-20 to read as follows:

1. - 16. (Cancelled)

17. (New) A refining furnace for refining a fluoride material

comprising:

an evacuated chamber;

a crucible, located in said chamber, for holding fluoride material and a scavenger; and

a heater for melting the fluoride material and scavenger in the crucible by forming a predetermined thermal distribution in a vicinity of an outside wall of said crucible,

wherein said crucible comprises a stack of a plurality of carbon crucibles and said fluoride material is refined by said scavenger in each of the plurality of carbon crucibles.

18. (New) A refining furnace for refining a fluoride material according to claim 17, wherein said plurality of carbon crucibles have substantially a same diameter.

19. (New) A refining furnace for refining a fluoride material according to Claim 17, wherein an internal height of each of the plurality of carbon crucibles is 50 mm or less.

20. (New) A refining furnace for refining a fluoride material according to Claim 17, wherein said fluoride material comprises calcium fluoride and said scavenger comprises at least one of cadmium fluoride, lead fluoride, zinc fluoride, bismuth fluoride, sodium fluoride and lithium fluoride.